



FEDERAL SECURITY AGENCY  
PUBLIC HEALTH SERVICE

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IN REPLYING, ADDRESS THE  
PUBLIC HEALTH SERVICE

REFER TO:

Tuberculosis Research Laboratory,  
411 East 69th St., New York 21, N. Y.

April 9, 1952.

Dr. Joshua Lederberg,  
Department of Genetics,  
The University of Wisconsin,  
College of Agriculture,  
Madison 6, Wisconsin.

Dear Joshua:

It seems that not only our last letters but also our thoughts have crossed.

You say that there is little doubt that the K1 and Klt mutants were derived from the W strain. Yet they carry a phage which lyses W-1177 whereas the wild-type W does not. Is that correct?

The history of the Klt - strains is the following: In Sept. 1950, markers were put on the Klt strains, yielding Klt-tr1, Klt-p, and Klt-h2. These 3 strains were crossed with W-677 and 58-161. In these crossing experiments the strains taken from a 20 h NY culture (YE + NZ medium) were grown together for 4 hrs. at 37° in NY (0.5 ml of each — total of 5.0 ml), before plating 0.1 ml of the unwashed suspension on minimal agar (incubated at 37°). Appreciable numbers of colonies appeared on the plates Klt-h2 x W-677, Klt-h2 x 58-161, and Klt-p x 58-161. Also in crosses among the Klt strains, appreciable numbers appeared on Klt-tr1 x Klt-h2 and Klt-p x Klt-h2. On the control plates there were either 0 or 1 colonies. However, these colonies were not tested further to see whether or not they really were prototrophs. At a later stage (Jan.-July 1951) various other Klt derivatives were crossed with the two indicator strains, but no recombinants were obtained in any of these experiments. I have no record of recombination experiments with Klt-h2 and Klt-p derivatives (e.g., Klt-h2-pl, etc.) These would be the most likely ones to recombine. I am sending you the parent strains Klt-h2 and Klt-p.

So far I have two pant<sup>-</sup> mutants in W-677, but unfortunately one is blocked in the synthesis of  $\beta$ -alanine, the other in the synthesis of pantoate. Tough luck!

There was one sentence in your letter that wasn't clear to me. "These (Klt- derivatives) gave very sporadic results with K-12 testers, and altogether only a very few prototrophs were obtained so that I cannot place too much emphasis on my negative results." What do you mean by

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negative results? Do you think that there was recombination <sup>in the first place?</sup>

Best regards, also to Esther,

WKM

Werner K. Maas

WKM/hl

P.S. Thank for the W-1172 strain which just arrived.  
(Also the W-1426)